

**APPARATUS AND METHOD FOR PERFORMING IMAGE TRANSFORMS**  
**IN A DIGITAL DISPLAY SYSTEM**

**ABSTRACT OF THE DISCLOSURE**

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An image processing apparatus for use in a display system comprises a display device for viewing image, and a geometric transformation module that is configured to precondition said image data with geometric transformations to thereby compensate for characteristics of the display system. The geometric transformation module may include a spatial transformation module for redefining spatial relationships between image pixels, an alignment and rotation correction module for repositioning image pixels, a focus correction module for correcting image defocus, a distortion correction module for correcting image distortions, and a multi-frame correlation module for performing motion-compensated frame rate conversion.

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